

Policy Pathways to Reduce Multidimensional Poverty in Punjab: Evidence and Recommendations

Muhammad Salman Waseem*, Asghar Ali, Muhammad Khalid Bashir and Qaisar Abbas

Institute of Agricultural & Resource Economics, University of Agriculture, Faisalabad Pakistan.

*Corresponding author's e-mail: Salmaneco999@gmail.com

Poverty is not merely about lack of income but a multidimensional deprivation across education, health, and living conditions. This paper is an attempt to examine level and determinants of multidimensional poverty in Punjab, Pakistan as per the Alkire-Foster methodology and based on the result of 2018 Multiple Indicator Cluster Survey (MICS). It has been found that 25 per cent of the population in Punjab is multidimensionally poor and the poverty is more in rural regions (26.61 per cent) than, in the urban regions (21.19 per cent). Educational inequality was found as a major factor: poverty rate in the households without formal education was 27.59 against 23.19% educated households. The Tobit regression analysis shows household size, foreign remittances and disability status of head-of-household as important factors associated with multidimensional poverty. A paradoxical relationship is also observed, where in some contexts, the presence of higher education in a household does not correlate with lower poverty, indicating structural inefficiencies in the labor market. These findings underline the importance of targeted, evidence-based policy measures, particularly in higher education and social protection, to address regional disparities and accelerate progress towards SDG 1 (No Poverty).

Keywords: Multidimensional poverty, regional disparities nexus, Tobit regression, Punjab, Pakistan.

INTRODUCTION

The international poverty discourse has been characterized by a major conceptual change from a limited monetary conception of deprivation toward using a multidimensional approach that captures the multiple types of disadvantages that affect human well-being in various ways (Bourguignon and Chakravarty 2003; World Bank 2022). Traditional income-based measures of poverty for example the US\$2.15/day international poverty line, are sensitive to material deprivation but miss deprivations factoring in health, education and living standards ultimately mediating the level of human capability and intergenerational mobility (in future generations) of a household (United Nations, 2015; World Bank, 2021). Responding to this gap, the Global Multidimensional Poverty Index (MPI), developed by OPHI and UNDP in 2010, operationalizes the Alkire-Foster methodology in order to identify who is poor and through which overlapping indicators in three major dimensions: health, education, and living standards (Alkire and Foster, 2011; Alkire et al., 2020). The MPI in this way enlarges the analytical space in which global poverty can be monitored and

amplifies the commitments of the SDGs 1 by taking into account the interlocking nature of deprivations.

Despite its conceptual elegance and policy adoption, the MPI has been subject to critical debates with respect to issues of indicator selection, weighting, threshold sensitivity and masking issues among intra-household inequalities, especially for women and children (Ravallion, 2011; Basu, 2019; Klasen and Lahoti, 2016). Nevertheless, its malleability has led to country-, and region-specific modifications in widely different settings of income. The high-income countries - such as the United States, Canada and some countries in the European Union - have increasingly used multidimensional deprivation indices to measure deprivation not accounted for in the income poverty measures, including digital deprivation, quality of housing, access to healthcare and energy poverty (Glassman and Wheaton, 2024; Eurostat, 2023). All these examples give an illustration that even in developed economics, income did not explain the structural vulnerabilities in deprived population, for example the case of Indigenous communities in Canada and the case of people in Southern Europe facing deprivation due to the pandemic (Statistics Canada, 2022; European Commission, 2022; Shrider, 2024). Thus, global adaptations of MPI show both

the flexibility of the methodology and the transparency of revealing patterns of unobserved deprivations across socioeconomic contexts.

Globally, multidimensional poverty is still quite concentrated and imbalanced between regions. According to the 2024 Global MPI, 1.1 billion people, or 18.3% of the global population, suffer from acute multidimensional poverty. 84% of them live in rural areas, and almost half of them are children (UNDP & OPHI, 2024). Regional concentrations are stark: Sub-Saharan Africa (579 million) and South Asia (385 million) together have 83% of the world's MPI-poor population (UNDP & OPHI, 2023). Conflict-affected contexts of deprivation show that 455 million MPI-poor live in fragile contexts (You et al., 2017; UNDP & OPHI, 2024). At the same time, several countries are making a rapid progress in eradicating multidimensional poverty, including but not limited to India, Vietnam, China and Bangladesh that are few examples of the responsiveness of MPI outcomes to consistent investments in health, education and basic services (Alkire et al., 2021; UNDP & OPHI, 2022; NITI Aayog, 2023). Yet climate shocks, global economic instability, and post-COVID reversals led to a reduction in gains in many areas of the world, making it clear to policymakers that multidimensional poverty is dynamic and sensitive to structural and environmental vulnerabilities (ADB, 2022; IPCC, 2022; UNICEF, 2023).

Pakistan's profile of multidimensional poverty reveals that structural inequalities exist across regions, socio-economic groups as well as rural-urban divides. Since the formal adoption of the Global MPI framework in 2016, the Government of Pakistan has been measuring the level of deprivation on the basis of ten important indicators related to education, health, and living standards (UNDP, 2016; Haq et al., 2024). Keeping in view the Human Development Index (HDI) 2024 report, the HDI Score of Pakistan is 0.540. When inequality is considered the HDI decreases to 0.360, which clearly indicates the inability of this country to grow more towards capabilities and opportunity (UNDP, 2024). Differences between provinces are still very high: rural Sindh and Balochistan show the worst levels of deprivation while urban Punjab shows relatively low head-counts (Arif, 2015). Conflict exposure further worsens such differences, particularly parts of Khyber Pakhtunkhwa and Balochistan in areas of non-conflict are significantly higher than areas in fragile regions in both countries (Hussain & Iqbal, 2019; UNDP & OPHI, 2024).

Pakistan has launched multiple social protection measures, including the most prominent ones such as Benazir Income Support Programme (BISP) and Ehsaas Programme, aimed at reducing deprivation through cash transfers, human capital investments, and financial inclusion (World Bank, 2021). Evaluations suggest these programs have helped make targeted households less vulnerable, but that their game-changing ability is limited by structural problems behind the

scenes. Chronic underinvestment in education (around 2.3% of GDP, compared to 4.5% in peer economies), widespread labor informality (around 72% in urban areas) and persistent gender gaps (with female literacy standing at 46% compared to 69% for men) and fiscal fragility continue to constrain ways out of poverty (UNESCO, 2020; ILO, 2021; World Bank, 2023). Demographic pressures - including the high number of people in households - further increase the deprivation probabilities. While despite the US\$33 billion in annual remittances, not enough is invested to make up for the systemic lack of basic services and rural infrastructures (World Bank, 2023; PIDE, 2022). Climatic disasters and imbalanced investments in the social sector are revising these challenges and strengthen the case for spatially focused and sector-integrated policy interventions.

Punjab, though the most developed province in Pakistan, some of the most significant intra-provincial disparities are present in this province. Prosperous northern and central districts, including Lahore, Rawalpindi and Gujranwala, consistently have low MPI headcounts whereas the level of deprivation is substantially higher in districts located in the southern regions of Punjab, including Rajanpur, Muzaffargarh, Bahawalpur and Rahim Yar Khan (Awan et al., 2011; Ullah, 2020). The Regional level analysis underscores that the educated households and hygienic sanitation facilities are considered as the most significant factors for deprivation, for example in Sargodha region the MPI scores are 0.186 and it shows that around 39% of deprivation arises due to non availability of education services (Javed and Awan, 2020; Abbas and Ashraf, 2024). Spatial spillover studies reveal that improvements in education, urbanization and service delivery spill over across district boundaries signaling the importance of place sensitive regional planning (Ullah et al., 2020; Cheema & Naseer, 2013). Despite the emerging evidence, there are large research gaps related to region-wide profiles of deprivation, determinants and policy differentiations in region. This research, thus, makes use of Punjab MICS 2018 dataset and the Alkire-Foster framework for developing a comprehensive multidimensional poverty assessment at the province level. By looking at headcounts, intensity, regional disparities and correlation with socioeconomic factors the research hopes to guide targeted interventions needed to progress towards Pakistan's commitments of SDG number one at the subnational level.

Despite growing evidence on poverty in multiple dimensions all over the world, there are important gaps for Pakistan. Many research works are based on old-held or aggregated national statistics and sub-provincial discrepancies remain under-researched. Few analyses systematically break down shares of the poverty profile by district for the entire state of Punjab, even though it is one of its largest states by population and isling of its developmental importance. Furthermore, while international research appears caught up with climate



shocks, exposure to conflict, and gendered deprivations in frameworks analyses of poverty, empirical work on poverty within Pakistan lags behind these global innovations.

This study bridges the above gaps by using both Alkire-Foster methodology and Punjab Multiple Indicator Cluster Survey (MICS 2018) of 53,840 households in the province (Bureau of Statistics Punjab, 2018). Although somewhat dated, the use of the dataset delivers a significant representativeness for analysis at the grass root level. By quantifying headcount and intensity, decomposing by indicator and region, and exploring socioeconomic correlates, including education, WASH, energy, demography, exposure to conflict and remittances, the study is designed to spark evidence with which to refine policy targeting. Ultimately, this work is part of Pakistan's quest to achieve SDG 1 by ascertaining structural constraints and policy opportunities at the sub-provincial level.

Based on a set of research questions established in advance, (i) What is the extent and distribution of multidimensional poverty across rural and urban areas and districts of Punjab, Pakistan? (ii) What are the key socioeconomic and demographic determinants of multidimensional poverty in these contexts? (iii) Based on these findings, what targeted policy interventions are most likely to reduce multidimensional poverty in Punjab's lagging regions?

METHODOLOGY

The study had been developed using the Multiple Indicator Cluster Survey (MICS) 2018 dataset that was conducted by the Punjab Bureau of Statistics with UNICEF. The data set included 53,840 households across all 36 districts of Punjab and was the best available maximum data set on households conducting the survey at provincial level (Punjab Bureau of Statistics, 2018; UNICEF, 2023). Although somewhat dated its breadth, representativeness, and multidimensional coverage serve as substitutes for the lack of more recent microdata and help guarantee enough robustness for both provincial and sub-provincial analysis. The survey contains detailed information on household living conditions, education, health and demographic attributes, thus facilitating the disaggregation of poverty profiles with respect to rural-urban residence, gender of household head and literacy level. This depth and the scope make MICS 2018 particularly suitable for analysis of structural and demographic dynamics of multidimensional poverty in Punjab.

Measuring Multidimensional Poverty: For this research, the Alkire-Foster (AF) method had been used to build the Multidimensional Poverty Index (MPI), which was generally known to be policy relevant, flexible, and analytically rigorous (Alkire and Foster, 2011). The MPI was organized over three dimensions - health, education and living standards - summarized in 10 indicators. Each dimension had the same weight (one third) and the indicators within each dimension have equal weight (as shown below in Table 1). A household

was extremely poor by multidimensional indicators when it was deprived in one third or more indicators (if there is a weighting, but the weighted indicators are included in that one-third).

Formally, the index is expressed as,

$$MPI = H \times A \quad (1)$$

where H is the headcount ratio (incidence of multidimensional poverty) and A is the average trajectory of poverty (share of poor people deprived) This framework ensures that, at once, both the breadth and depth of poverty are measured and, in turn, the AF stands in contrast to the purely income approach or headcount measures of poverty.

Table 1. List of MPI Variables and Their Descriptions.

Sr.	Variable Name	Symbol	Weight
1	Nutrition (Crowding Out)	NI	1/6
2	Child mortality	CM	1/6
3	Years of Schooling	YS	1/6
4	Child School Attendance	CSA	1/6
5	Electricity	EL	1/18
6	Sanitation	SA	1/18
7	Drinking Water	DW	1/18
8	Housing	HO	1/18
9	Cooking Fuel	CF	1/18
10	Assets	AS	1/18

Analytical Stages: Comparative Analysis of province of Punjab (Horizontal Degradation- Stage 2)

The comparative analysis is made in order to analyze those particular subpopulations who are categorized based on: (i) households located in distinct regions (rural and urban), (ii) the gender of the household's head, and (iii) literacy levels (Bashir and Schilizzi, 2013). Such disaggregation will be useful in identifying vulnerable groups and spatial inequalities that are important in the design of policy targeting.

Punjab Furthers divided into following categories - for a granular analysis.

1. Region based Comparative Analysis: Rural / Urban Punjab - constituting on households of Punjab.
2. Gender based Comparative Analysis: Male / Female Punjab - constituting on households of Punjab.
3. Education based Comparative Analysis: Educated / Uneducated Punjab - constituting on households of Punjab.

This disaggregation is following international practice on multidimensional poverty studies (Bashir and Schilizzi 2013). It makes it possible to identify such vulnerable subpopulations that are believed to be at greatest risk of perennial deprivation. Moreover, it provides evidence base on where policy interventions can be targeted in a strategic and context specific way.

Econometric Model: Tobit Regression: The study is focused on investigating the socioeconomic characteristic of



multidimensional poverty and applying the Tobit regression model due to the unicast characteristic of MPI in the form of zero to one (Tobin, 1958; Waseem, 2015). The independent variables are the family size of the household (MHS), foreign remittances (FR), the physical disability condition of the household head (HMD), if they are receiving financial help at formal institutions (FA), the happiness level of the household (PBL), and, finally, the cash donations given to the household by the community (RCD); as shown below in Table 2. The dependent variable employed is the MPI. The model presented above can give a more elaborate picture of various and cross-interactional causes of sustained poverty in Punjab and establish the exact effect of these factors.

The Tobit model is specified as:

$$MPI_i = \beta_0 + \beta_1 MHS_i + \beta_2 FR_i + \beta_3 HMD_i + \beta_4 FA_i + \beta_5 PBL_i + \beta_6 RCD_i + \beta_7 FA * HEL_i + \beta_8 HFM * HEL_i + \beta_9 FR * HEL_i + \epsilon_i \quad (2)$$

Here,

- MPI_i^* is the latent MPI, observed as MPI_i if $MPI_i^* > 0$ and 0 otherwise.
- A “ β_0 ” is the intercept, β_1 to β_6 are coefficients, and ϵ_i is the error term.

Table 2. List of Socioeconomic Variables Affecting MPI.

Sr.	Variable Name	Symbol
1	Household Family Size	HFM
2	Receiving Foreign Remittances	FR
3	Households with Functional Disability	HFD
4	Receiving Financial Assistance	FA
5	Perception of a Better Life (Happiness)	HHL
6	Receiving Cash Donation	RCD
7	Interaction Variable: Financial Assistance x Education Level of Household Head	FA*HEL
8	Interaction Variable: Household Family Size x Education Level of Household Head	HFM*HEL
9	Interaction Variable: Foreign Remittances x Education Level of Household Head	FR*HEL

This specification (interaction variables) provides direct correlates of multidimensional poverty as well as insights into the interaction of education with other socioeconomic factors in order to inform household vulnerability. The econometric framework thus complements the AF method in terms of moving from descriptive measures of incidence to a causal inference and explanatory analysis, in order to improve the study's relevance for the purposes of evidence-based policymaking.

RESULTS AND DISCUSSIONS

This analysis comprises of 2 basic sections i.e. Assessment of multidimensional poverty at the provincial level on Association of Multidimensional Poverty Index (MPI) for Punjab and Study of socioeconomical determinants

influencing the poverty in multiple dimensions in Pakistan through the regression analysis. On a provincial basis, MPI is 0.75 in province of Punjab and there are about one fourth of the total surveyed (53,840) households falls in the multidimensional poor category groups. This prevalence is indicative of the denominator of deprivation spreading to the aspects of health care, education and standards of living. Of these, poor living standards and lack of education are also contributing factors most towards the poverty as reflected in the national trends that indicate that 30% of the population is living in poverty and 38% of the population are still illiterate as reported from the Bureau of Statistics in Pakistan (2019). Disaggregating on a regional basis shows that there are very vast differences The MPI value of Rural households (37,860 surveyed) is 0.73 with a poverty incidence of 26.61 percent, whereas urban households will be much lower, at 0.08 and 21.19 percent. The deficient sanitation and lack of regular electricity in rural localities are also some of the primary causes of the rural-urban gap and lead to an increase in the level of deprivation (Haq et al., 2024). On the other hand, urban residents are more privileged in access to services which insulates them against multidimensional poverty as it is seen in the wider global context (UNDP & OPHI, 2024).

It can be seen in Table 3, that by gender-based disaggregation the male-headed households (48,163) indicate an MPI of 0.75 and a poverty incidence of 24.95 percent. Female-headed households (5,677) have a slight increase in poverty level as its value of 25.45% is slightly larger than that of middle- or top-income households (25.32%) due to the lack of access to resources and the vulnerabilities imposed by female status (Malik & Rafi, 2020).

There is a striking educational gap as well; out of 22,186 uneducated households, the MPI is 0.72 and poor people incidence is 27.29, whereas the 31,654 educated households have a much lower MPI (0.77) with a lower percentage of people in poverty (23.19). The inability to take full advantage of the poverty-alleviating capabilities of education due to structural barriers is evident in terms of the mitigation of different deprivations (Awan et al., 2011). It is important to note that rural populations, female-headed households and uneducated families have been disproportionately affected by the burden of multidimensional poverty in Punjab that requires specialized structural interventions that are need-based (Naveed & Ali, 2012).

The regression analysis that explains the important socioeconomic factors that may cause the MPI (Tobit regression model, Table 2). Expectedly, and in contrast to conventional assumptions, an increase in higher education levels of household heads (HEL; $B = 0.0559$, $p < 0.001$) is correlated with a greater multidimensional poverty. This contradiction could be attributed to the inability of the jobs market to offer skilled employment opportunities because of economic growth or political stability and the aftermath of the corona pandemic that led to unemployment or



Table 3. MPI Estimates of Aggregated and Disaggregated Punjab.

Region	HH	Education		Health		Standards of Living						MPI	Poverty %
		YS	SA	CM	N	H	E	CF	AWR	SI	AO		
Punjab	53840	0.1	0.12	0.08	0.71	0.14	0.04	0.44	0.48	0.20	0.18	0.75	25.00
Rural	37860	0.1	0.12	0.07	0.69	0.19	0.05	0.53	0.62	0.21	0.24	0.73	26.61
Urban	15980	0.1	0.12	0.08	0.77	0.03	0.01	0.23	0.13	0.19	0.04	0.08	21.19
Male	48163	0.1	0.12	0.05	0.70	0.14	0.04	0.44	0.48	0.21	0.18	0.75	24.95
Female	5677	0.1	0.12	0.08	0.80	0.10	0.03	0.41	0.42	0.19	0.15	0.75	25.45
Uneducated	22186	0.1	0.12	0.07	0.69	0.21	0.06	0.64	0.61	0.21	0.27	0.72	27.59
Educated	31654	0.1	0.09	0.08	0.73	0.09	0.02	0.30	0.38	0.20	0.11	0.77	23.19

underemployment despite educational attainment (Tilak, 2002).

Dependency on remittances ($\beta = 0.0342$, $p < 0.001$) is associated with higher poverty levels and the inability of affected households to adapt or lose their source of finance due to non-diversification of revenue income and the lack of hedges (Adams & Page, 2005). The size of the household (HFM; $= 0.0221$, $p < 0.001$) is another factor that positively affects poverty; the more the dependents, the lesser the resources per person will be, increasing poverty (Lanjouw & Ravallion, 1995).

The physical disability of the household head (DA; 0.0086 ; $p = 0.003$) also increases poverty elevating the notion of intersectionality of marginalized groups (Mitra et al., 2013). Interaction terms provide evidence that complex poverty dynamics can be tamed by targeted support: financial assistance and heightened education (FA x HEL; $\beta = -0.1784$, $p < 0.001$), greater family sizes with educated heads (HFM x HEL; $\beta = -0.0115$, $p < 0.001$), and remittances with educational levels (FR x HEL; 0.02811 , $p < 0.001$) have all indicated that social support measures could offset some of the costs of the complex nature. Other variables such as the happiness level with household, the receipt of official financial aid (FA) alone, and the donation of cash money within the society (CD) were not significant in relation to evaluating MPI (Diener et al., 1999).

Table 2. Tobit Regression - Aggregated Punjab Analysis.

Variables	Coefficient	Standard Error	P > t
HHL (β_1)	-0.0008	0.0010059	0.433
HEL (β_2)	0.0559 *	0.0014103	0.000
FR (β_3)	0.0342 *	0.0029527	0.000
HFM (β_4)	0.0221 *	0.0015113	0.000
DA (β_5)	0.0086 *	0.0028703	0.003
FA (β_6)	0.0039	0.0019357	0.045
CD (β_7)	-0.0007	0.0028110	0.801
FA*HEL (β_8)	-0.1784 *	0.0025274	0.000
HFM*HEL (β_9)	-0.0115 *	0.0019964	0.000
FR*HEL (β_{10})	-0.2811 *	0.0036380	0.000
C	0.7107	0.0012935	0.000

Source: Author's own calculations

SUMMARY

The article presents an exploration on how poverty in Punjab, Pakistan is multi-faceted in nature as there are shortages in various areas besides the lack of income. Malnutrition, insufficiency in the education and inadequate housing are some other areas of poverty. The study occupies sound methodology comprising multidimensional measurement of poverty based on the broad-based household survey, the 'way to investigate' the reality of multidimensional poverty which affects some quarter of the population of Punjab. The analysis makes evidence that there are high levels of disparity between regions as the rural part is more deprived than the urban one. Gender and education also come out as major players here as female headed households and those that are not formally educated have to bear the brunt. These results strengthen the heterogeneity of the views on poverty and need for local and context-specific solutions. An in-depth analysis through progressive regressive modelling of data reveals important issues such as socioeconomic information that pertains to the existence of poverty like members of households, external remittance support and physical impairments amongst households. Interestingly, enough, the study finds that there exists a paradox that more education does not coincide with less poverty, there are structural impasses in the labor market structures and economic opportunities. All in all, the study presents a synthesis of global poverty measurement frameworks and ground realities in Punjab that can be used, realistically, to guide specific actions that can help achieve the eradication of poverty in multiple dimensions and attainment of inclusive growth.

Conclusion: The study recognizes the multifaceted and stratified nature of poverty particularly in the Punjab and the need to deal with this directly from a multidimensional angle, which should not avoid the dependence on income levels. The results suggest that multidimensional deprivation experiences affect 1/4 households, and so on are imperfectly affected, as are e.g., rural, female headed, less sensitive to education and so on. The paradoxical correlation between higher education and continued poverty calls into attention economic and structural impediments artificial which partly imbalance the capability of the educated persons to avert being in such a



state of deprivation and which need to be overturned urgently through the policy mechanism. Besides, remittance dependency and the enlargement of the family increase the hallmark of vulnerability as families have to struggle with multiple barriers. Although the study has some data limitations, the study set some critical ground to guide policy manufacturers as it builds a foundation of evidence to give it basis to invest in targeted, yet effective interventions. However, this can play a huge part in the eradication of poverty activities and just social development in Punjab by tackling the silos of deprivations through the context sensitive provisions for its inclusiveness to the populations in the Punjab. This study built upon not only expanding the collection of poverty complexities but prescribes the recipe of how to capture its sustainability, thus supporting this argument that in order to support poverty alleviation, there must be a combination of both local/communal and global frameworks.

Policy Recommendations: The study suggests evidence-based policy actions to curb deprivation and foster inclusive development in Punjab based on the factors emerging out of the multidimensional poverty analysis of the state.

Intensify Education Systems/Labor-Gaps: Investments in upgrading the rural education infrastructure is of prime importance with special attention to the access to quality education in the secondary stage. Redressing skills gap through updating curricula as per the changing needs of the labor market, and also establishing cooperation between the education sector and the industry could help improve the employability of the younger generations and the unemployment issue (Psacharopoulos & Patrinos, 2018; Schultz, 2002; Tilak, 2002).

The Targeted Support to Female-headed Households: Interventions to improve the economic sustainability of female-headed households can include cash transfer and microfinance programs designed to suit the needs of that particular household. At the same time, non-gender-responsive policies allowing educational opportunities and employment possibilities are important to remove structural disadvantages and increase the level of social equity (Kabeer, 2020; Malik & Rafi, 2020; Chant, 2016).

Intensify Social Protection Systems of the At-Risk Populations: Increasing the scope of the social safety nets to ensure access to disability-friendly healthcare service and assistive technologies will help in filling pressing gaps experienced by the persons with disabilities. Complementary family planning programs among the larger households overcome problem of resource shortages and such measures are in line with demographic-economic policies to reduce poverty pressures (Mitra et al., 2013; Lanjouw & Ravallion, 1995; Barrientos & Hulme, 2008).

Enhance Usage/Effect of Foreign Remittances: Diaspora investments in local community development by way of remittance-linked joint ventures and savings mobilization should be stimulated by public financial literacy campaigns. Formal mechanisms put in place to channel remittances to infrastructure projects can help to diminish excessive consumption dependency of households based on remittances and enhance a sustainable domestic economic development (Ratha, 2013; Adams & Page, 2005; Haas, 2010).

These guidelines draw on international best practices and practical lessons of this review, with the goal of helping cultivate a multi-sectoral, inclusive tonal approach to tackling poverty in Punjab, to be replicated across Pakistan.

Limitations and Future Research: Instead, the phenomenon of languishing in poverty in Punjab, as confirmed by the 2018 data obtained as part of a MICS survey is linked to its actual results in terms of poverty reduction due to long-term underdevelopment (Heltberg et al., 2013). The time limits may be an underestimation of the existing poverty and vulnerability emergence in the present (Alkire et al., 2021). Besides, although the quantitative approach proves accurate in the identification of poverty drivers, they cannot comprehensively unleash the qualitative aspects of social exclusion and psychological effects (Sen, 1999; Kabeer, 2020). The fact that the information is based on Punjab limits the generalizability to other regions in Pakistan due to an enormous variance in multidimensional poverty patterns across the country (Haq et al., 2024).

Probably the most important direction of future research is the need to consolidate the collection of updated data including post-pandemic and covid disaster impacts (UNDP, 2024) and the introduction of longitudinal studies to observe the changes of poverty scenario and policy impact in time (Alkire et al., 2021). There is also a need to conduct ethnographic research to further the knowledge on socioeconomic complexity, particularly poverty-education relationship (Tilak, 2002; Banerjee & Duflo, 2011). To inform more considerate interventions, explorations of cultural and institutional forces that redefine poverty, especially associated with remittances and household arrangements can be carried out (Adams & Page, 2005; Haas, 2010). Intersectional analyses of gender and disability along with rurality as drivers of poverty become instrumental in the formulation of differentiated policies (Malik and Rafi, 2020; Mitra et al., 2013). Lastly, it should explore district-level differences in Punjab to allow localizing the approaches (Haq et al., 2024).

Acknowledgement: The authors acknowledge the Punjab Bureau of Statistics and UNICEF for providing access to the Multiple Indicator Cluster Survey (MICS) 2018 dataset. The authors are also grateful to colleagues and reviewers whose critical feedback helped improve the analytical rigor and



clarity of this study. Any remaining errors are the sole responsibility of the authors.

CRedit Author Statement: Muhammad Salman Waseem and Asghar Ali contributed to conceptualization and writing-original draft. Muhammad Khalid Bashir and Qaisar Abbas these are committee members of this study.

Conflict of Interest: The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Ethical Statement: This study is based on secondary data obtained from the Punjab Multiple Indicator Cluster Survey (MICS) 2018, which was conducted by the Punjab Bureau of Statistics in collaboration with UNICEF. The survey followed internationally accepted ethical standards, including voluntary participation, confidentiality, and anonymization of respondents. No additional ethical approval was required for this analysis.

Availability of Data: The data supporting the findings of this study are publicly available from the Punjab Bureau of

Statistics and UNICEF upon reasonable request, subject to their data access policies.

Consent to Participate: Not applicable. This study used anonymized secondary data collected under informed consent by the original survey administrators.

Informed Consent: Informed consent was obtained from all participants at the time of the original MICS 2018 survey by the Punjab Bureau of Statistics and UNICEF.

Consent for Publication: Not applicable. The study does not contain any individual-level identifiable data.

SDGs Addressed: No poverty, quality education, reduced inequalities.

Policy Referred: Benazir Income Support Programme (BISP); Ehsaas Programme and Ehsaas Nashonuma Initiative; Pakistan National Multidimensional Poverty Index (MPI) Framework

Publisher's Note: All claims stated in this article are exclusively those of the authors and do not necessarily represent those of their affiliated organizations or those of the publisher, the editors, and the reviewers. Any product that may be evaluated/assessed in this article or claimed by its manufacturer is not guaranteed or endorsed by the publisher/editors.

REFERENCES

- Abbas, K. & Ashraf, M. (2024). Multidimensional poverty in Sargodha, Pakistan: A quantitative and qualitative analysis. *Journal of Poverty Studies*. 12 (3): 45-67.
- Adams, R. H. & Page, J. (2005). Do international migration and remittances reduce poverty in developing countries? *World Development*. 33 (10): 1645-1669. <https://doi.org/10.1016/j.worlddev.2005.05.004>
- ADB (2022). Asian Development Outlook 2022. *Manila: Asian Development Bank Publishing*.
- Alkire, S. & Foster, J. (2011). Counting and multidimensional poverty measurement. *Journal of Public Economics*. 95 (7-8): 476 - 487. <https://doi.org/10.1016/j.jpubeco.2010.11.006>
- Alkire, S., Conceição, P., Calderón, C., Dirksen, J., Evans, M., Gonzales, R., Hall, J., Jahic, A., Kanagaratnam, U., Kivilo, M., Kovacevic, M., Kovesdi, F., Mitchell, C., Nogales, R., Ortubia, A., Roncancio, M. P., Quinn, N., Rivera, C., Pettee, S. S., & Suppa, N. (2020). Charting pathways out of multidimensional poverty: Achieving the SDGs. *Oxford Poverty and Human Development Initiative*.
- Alkire, S., Kanagaratnam, U. & Suppa, N. (2021). The global multidimensional poverty index (MPI) 2021. OPHI MPI Methodological Note 51. *Oxford Poverty and Human Development Initiative*.
- Awan, M. S., Malik, N., Sarwar, H. & Waqas, M. (2011). Impact of education on poverty reduction. *International Journal of Academic Research*. 3 (1): 659-664.
- Banerjee, A. V. & Duflo, E. (2011). Poor economics: A radical rethinking of the way to fight global poverty. *Public Affairs*.
- Barrientos, A. and D. Hulme. 2008. Social protection for the poor and poorest: Concepts, policies and politics. *Palgrave Macmillan*.
- Bashir, M. K., & Schilizzi, S. (2013). Determinants of rural household poverty: Evidence from Pakistan. *Journal of Development Studies*, 49 (4): 521-535.
- Basu, K. (2019). The multidimensional poverty index: A critique. *Economic and Political Weekly*. 54 (12): 34 - 39.
- Bourguignon, F. & Chakravarty, S. R. (2003). The measurement of multidimensional poverty. *Journal of Economic Inequality*. 1 (1): 25-49.
- Chant, S. (2016). Women-headed households: Poorest of the poor? Perspectives from Mexico, Costa Rica, and the Philippines. *Gender & Development*. 24 (3): 385 - 400.



- Cheema, A. & Naseer, M. F. (2013). Education and poverty in Pakistan: A district-level analysis. *Lahore Journal of Economics*. 18: 205 - 232.
- Diener, E., Suh, E. M., Lucas, R. E. & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*.
- European Commission (2022). Employment and social developments in Europe 2022. *Publications Office of the European Union*.
- Glassman, B. & Wheaton, L. (2024). Multidimensional Deprivation in the United States: 2010 - 2023. *U.S. Census Bureau*.
- Haas, H. D. (2010). Migration and development: A theoretical perspective. *International Migration Review*. 44 (1): 227 - 264.
- Haq, R., Zia U. & Arif, G. M. (2024). Multidimensional poverty in Pakistan: A spatial analysis. *Pakistan Journal of Applied Economics*. 34 (1): 45 - 67.
- Heltberg, R., Oviedo, A. M. & Talukdar, F. (2013). What do household surveys really tell us about risk, shocks, and risk management in the developing world? *The World Bank Research Observer*. 28 (2): 175 - 197.
- Hussain, A. & Iqbal, N. (2019). Conflict and multidimensional poverty in Pakistan: A case study of Khyber Pakhtunkhwa. *Conflict and Development Review*. 12 (1): 56 - 78.
- International Labor Organization (2021). Informal employment in Pakistan: Trends and challenges. *ILO Publications*. <https://www.ilo.org/informal-economy-pakistan-2021>
- IPCC (2023). Climate Change 2023: Synthesis Report. *Intergovernmental Panel on Climate Change*.
- Javed, S. A. & Awan, M. S. (2020). Multidimensional poverty in Punjab: A district-level analysis. *Pakistan Economic and Social Review*. 58 (2): 123 - 145.
- Kabeer, N. 2020. Gender equality, poverty reduction, and inclusive growth. *Gender & Development*. 28(1): 1 - 15.
- Klasen, S. & Lahoti, R. (2016). How serious is the neglect of intra-household inequality in multidimensional poverty indices? *World Development*. 89: 125 - 137.
- Lanjouw, P. & Ravallion, M. (1995). Poverty and household size. *The Economic Journal*. 105 (433): 1415-1434.
- Malik, S. J. & Rafi, M. (2020). Gender and poverty in Pakistan: A multidimensional analysis. *Journal of Gender Studies*. 29 (3): 345 - 360.
- Mitra, S., Posarac, A. & Vick, B. (2013). Disability and poverty in developing countries: A multidimensional study. *World Development*. 41: 1 - 18.
- Naveed, A. & Ali, N. (2012). Poverty dynamics in Pakistan. *Pakistan Economic Review*. 50 (2): 145 - 165.
- NITI Aayog. 2023. National Multidimensional Poverty Index: A Progress Review 2023. New Delhi: *Government of India*.
- Pakistan Bureau of Statistics. 2018. Multiple Indicator Cluster Survey 2017-18. *Government of Punjab*. <http://www.bos.gop.pk/mics2017-18>
- Pakistan Bureau of Statistics. 2019. Pakistan Social and Living Standards Measurement Survey 2018-2019.
- Pakistan Institute of Development Economics. 2022. *Family size and multidimensional poverty in Pakistan*. *PIDE Research Report*. <https://pide.org.pk/family-size-poverty-2022>
- Psacharopoulos, G. & Patrinos, H. A. (2018). Returns to investment in education: A decennial review of the global literature. *Education Economics*. 26 (5): 445 - 458.
- Ratha, D. (2013). The impact of remittances on economic growth and poverty reduction. *Migration Policy Institute*.
- Schultz, T. P. (2002). *Why governments should invest more to educate the poor*. *Journal of Economic Perspectives*. 16 (2): 93-116.
- Sen, A. (1999). *Development as freedom*. Oxford University Press.
- Shrider, E. A. (2024). Income and poverty in the United States: 2023. *U.S. Census Bureau*.
- Statistics Canada. (2022). Housing conditions among First Nations people, Métis and Inuit in Canada. *Government of Canada*.
- Tilak, J. B. G. (2002). Education and poverty. *Journal of Human Development*. 3 (2): 191-207.
- Tobin, J. (1958). Estimation of relationships for limited dependent variables. *Econometrica*. 26: 24 - 36.
- Ullah, A., Khan, M. & Hussain, S. (2020). Spatial analysis of district-level poverty in Pakistan. *Pakistan Journal of Applied Economics*. 30 (1): 45 - 67.
- UNDP (2016). Multidimensional poverty in Lebanon: 2016 estimates. *United Nations Development Programme*.
- UNDP (2024). Sustainable Development Goals progress report. *United Nations Development Programme*.
- UNDP and OPHI (2022). Global Multidimensional Poverty Index 2022: *United Nations Development Programme and Oxford Poverty and Human Development Initiative, UK*.
- UNDP and OPHI (2023). Global Multidimensional Poverty Index 2023: *United Nations Development Programme and Oxford Poverty and Human Development Initiative, UK*.
- UNDP and OPHI (2024). Global multidimensional poverty index 2024: Poverty amid conflict. *United Nations Development Programme and Oxford Poverty and Human Development Initiative, UK*.



- UNESCO (2020). Global education monitoring report 2020: Inclusion and education. *UNESCO Publishing*.
- UNICEF (2023). Child poverty in the developing world: A multidimensional approach. *United Nations Children's Fund*.
- United Nations (2015). Transforming our world: The 2030 agenda for sustainable development. *United Nations General Assembly Report*.
- Waseem, M. S. (2015). Efficiency Analysis of Basic Health Units (BHU's): A case study of district Faisalabad. Unpublished MPhil Dissertation. Institute of Agriculture and Resource Economics, Faisalabad, Pakistan.
- World Bank (2021). Pakistan: Poverty reduction strategy paper. *World Bank Group*.
- World Bank (2022). Pakistan Floods 2022: Post-Disaster Needs Assessment.
- World Bank (2023). Migration and development brief 38: Remittances to Pakistan. *World Bank Group*.
<https://www.worldbank.org/remittances-pakistan-2023>
- World Bank (2023). Pakistan: Post-flood poverty assessment. *World Bank Group*.
<https://www.worldbank.org/en/country/pakistan/publication/pakistan-post-flood-poverty-assessment>
- You, J., Kontoleon, A. & Wang, S. (2017). Identifying a Sustained Pathway to Multidimensional Poverty Reduction: Evidence from Two Chinese Provinces. *The Journal of Development Studies*. 55 (1): 137 - 158.

